DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028359
Date Inspected: 24-Aug-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Jobsite

CWI Name: Berry Drake

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG 13 / 14 West

Summary of Items Observed:

On this date, Quality Assurance Inspector (QAI) Robert A. DeArmond was present at the San Francisco Oakland bay Bridge job site at Yerba Buena Island to observe erection and welding activities for the San Francisco Oakland Bay Bridge (SFOBB) project. This Quality Assurance Inspector (QAI) observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

13WEST
A). (R1) PP 122.75-W3-WTF (Longitudinal Diaphragm Stiffener)
B). (R1) PP 122.75-W3-WTW (Longitudinal Diaphragm Stiffener)

A). (R1) PP 122.75-W3-WTF (Longitudinal Diaphragm Stiffener)

The QAI observed that welder 4671-Mike Jiminez, was excavating a previous Ultrasonic Indication discovered by QA followed by fill and cover pass welding at PP 122.75; Longitudinal Diaphragm W.T. Stiffener in the horizontal (2G) position. This QAI observed these parameters as defined in Welding Procedure Specification WPS-ABF-WPS-D15-1000-Repair. The QC inspector Scott Kortum verified the back-gouge depth and length as well as performing Magnetic Particle Testing for this location and found it to be acceptable, however, following this QAI observation, a visible slag inclusion was apparent, this information was relayed to the QC and additional back-gouging continued to sound metal. The welder then continued pre-heat throughout the area during welding using a propane type weed burner at 40 degrees Celsius (150 degrees F) which was verified using a tempilstik and infrared gun by the QC. The welder was using the Shielded Metal Arc Welding (SMAW) electrode E7018 for the Complete Joint Penetration (CJP) weld in the horizontal (2G) position with 3.2 mm electrode with 125.2 amps.

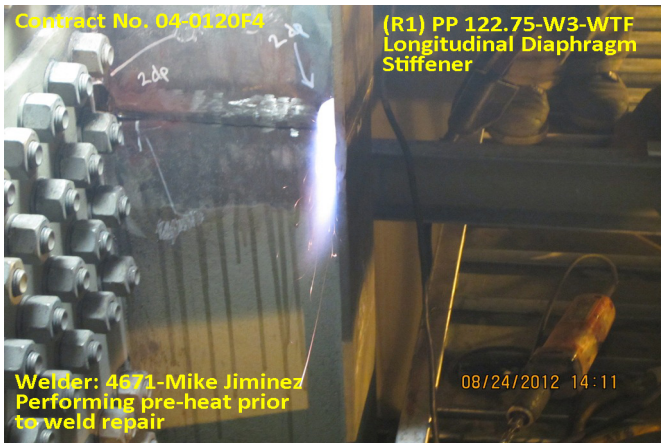
The welder utilized a power grinder and power wire wheel for the interpass cleaning. The QC inspector for this location was John Hayes and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations.

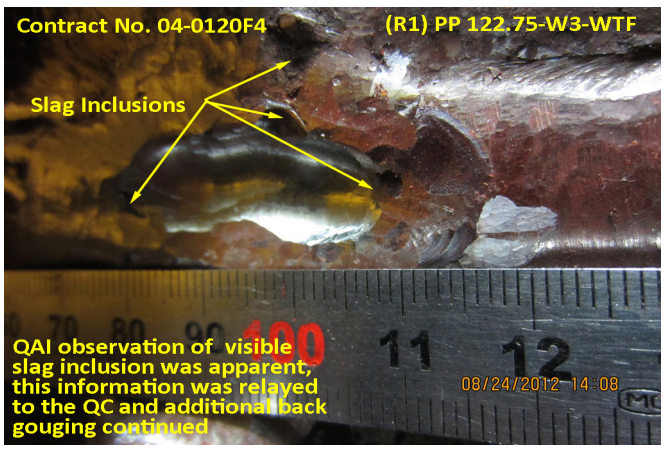
B). (R1) PP 122.75-W3-WTW (Longitudinal Diaphragm Stiffener)

The QAI observed that welder 4671-Mike Jiminez, was excavating a previous Ultrasonic Indication discovered by QA followed by fill and cover pass welding at PP 122.75; Longitudinal Diaphragm W.T. Stiffener in the horizontal (2G) position. This QAI observed these parameters as defined in Welding Procedure Specification WPS-ABF-WPS-D15-1000-Repair. The QC inspector Scott Kortum verified the back-gouge depth and length as well as performing Magnetic Particle Testing for this location and found it to be acceptable, however, following this QAI observation, a visible slag inclusion was apparent, this information was relayed to the QC and additional back-gouging continued to sound metal. The welder then continued pre-heat throughout the area during welding using a propane type weed burner at 40 degrees Celsius (150 degrees F) which was verified using a tempilstik and infrared gun by the QC. The welder was using the Shielded Metal Arc Welding (SMAW) electrode E7018 for the Complete Joint Penetration (CJP) weld in the horizontal (2G) position with 3.2 mm electrode with 125.2 amps. The welder utilized a power grinder and power wire wheel for the interpass cleaning. The QC inspector for this location was John Hayes and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding utilizing the WPS's as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspectors utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The consumables utilized for the welding process stated appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators. Unless noted otherwise, all work observed on this date appeared to be in general compliance with the contract documents at the time of observations.





WELDING INSPECTION REPORT

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Summary of Conversations:

As mentioned above between QA and QC concerning this project

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510 385 5910, who represents the Office of Structural Materials for your project.

Inspected By:	DeArmond,Robert	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer